APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/474,031	12/28/1999	ROBERT DUNCAN DOVERSPIKE	104172	1768

7590   01/31/2003

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EXAMINER
HA, YVONNE QUY M

ART UNIT	PAPER NUMBER
2697	

DATE MAILED: 01/31/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

	Application No.		Applicant(s)
Office Action Summary	09/474,031		DOVERSPIKE ET AL.
	Examiner		Art Unit
	Yvonne Q. Ha		2697

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE _3_ MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on _4/7/00_

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) _1-20_ is/are pending in the application.

    4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) _1-20_ is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on _28 December 1999_ is/are: a)☐ accepted or b)☒ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

11)☐ The proposed drawing correction filed on _____ is: a)☐ approved b)☐ disapproved by the Examiner.

    If approved, corrected drawings are required in reply to this Office action.

12)☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

13)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a)☐ All b)☐ Some * c)☐ None of:

      1.☐ Certified copies of the priority documents have been received.

      2.☐ Certified copies of the priority documents have been received in Application No. _____ .

      3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

    * See the attached detailed Office action for a list of the certified copies not received.

14)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).

    a) ☐ The translation of the foreign language provisional application has been received.

15)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ .
4) ☐ Interview Summary (PTO-413) Paper No(s). _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: .

DETAILED ACTION

Drawings

1.   The drawings are objected to as failing to comply with 37 CFR 1.84(p)(5) because they

do not include the following reference sign(s) mentioned in the description: in figure 2,

references 201, 203, 205, 207, 209, 211, 213, 215, 217, 251, 253, 255, 257, 259, 261, 263, 265,

267, 269, and 271. A proposed drawing correction or corrected drawings are required in reply to

the Office action to avoid abandonment of the application. The objection to the drawings will

not be held in abeyance.

Claim Rejections - 35 USC § 102

2.   The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the

basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (e) the invention was described in (1) an application for patent, published under section 122(b), by another filed
> in the United States before the invention by the applicant for patent or (2) a patent granted on an application for
> patent by another filed in the United States before the invention by the applicant for patent, except that an
> international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this
> subsection of an application filed in the United States only if the international application designated the United
> States and was published under Article 21(2) of such treaty in the English language.

Claims 1-20 are rejected under 35 U.S.C. 102(e) as being anticipated by Chaudhuri (US Patent

6,324,162).

- Referring to claim 1, Chaudhuri discloses a method that restores communication in a

mesh network between a first end node and a second end node (col. 1, line 65-66), comprising:

transmitting a communication signal over a first communication path comprising the first end

node (figure 1, 12E end node and 19E port), the second end node (figure 1, 12D end node and

19D port) and one or more first intermediate nodes (figure 1, nodes 12A, 12B, 12C, 12E, 12F,

12G); detecting an error condition in at least one of the first end node and the second end node

(col. 2, line 21-24); and rerouting the communication signal over a second path based on the detected error condition (col. 2, line 23-25 access database of pre-computed paths corresponding to failed path), the second path including the first end node, the second end node, and one or more second intermediate nodes (col. 2, line 26-32), wherein the second intermediate nodes are disjoint from the one or more first intermediate nodes to restore communication (col. 1, line 39-42, col. 8, line 41-44, figure 3 links 14.3, 14.10, 14.9 share no common nodes with restoration path of links 14.8, 14.7, 14.6).

- Referring to claims 2 and 14, Chaudhuri discloses all aspects of the claimed invention and further teaches the second path further includes one or more second transmission lines each having a plurality of channels (col. 4, line 40-43 a list of restoration channels), and at least one channel used to reroute the communication signal is determined after the error condition is detected (col. 4, line 53-56 shortest path to restore and channel are computed).

- Referring to claim 3, Chaudhuri discloses all aspects of the claimed invention and further teaches sending one or more back-off commands to release at least one channel used to reroute the communication signal (col. 5, line 19-22 removed channels when done in certain restored path).

- Referring to claim 4, Chaudhuri discloses all aspects of the claimed invention and further teaches the first and second end node coordinate rerouting the communication signal over the second path (col. 4, line 26-28).

- Referring to claim 5, Chaudhuri discloses all aspects of the claimed invention and further teaches the mesh network is an optical mesh network (col. 7, line 31-32, col. 9 line 38-39, OC-48 signal).

- Referring to claim 6, Chaudhuri discloses all aspects of the claimed invention and further teaches the second path is determined before the error condition is determined (col. 6, line 38-42 localized restoration is attempt first where the failed node tries to restore on another path, if no capacity available then it informed the two end nodes for computed data).

- Referring to claims 7 and 17, Chaudhuri discloses all aspects of the claimed invention and further teaches the step of rerouting the communication signal includes issuing commands from the first end node to the one or more second intermediate nodes to bidirectionally reroute the communication signal along the second path (col. 7, line 58-67, col. 8, line 33-35 communication between end nodes and its adjacent nodes).

- Referring to claim 8, Chaudhuri discloses all aspects of the claimed invention and further teaches the step or routing the communication signal includes: sending a failure indication from the first end node to the second end node (col. 2, line 21-24); and issuing commands from the second end node to the one or more second intermediate nodes to bidirectionally reroute the communication signal along the second path (col. 7, line 58-67, col. 8, line 33-35, communication between end nodes and its adjacent nodes, col. 7, line 32-33 bi-directional SONET protocol).

- Referring to claim 9, Chaudhuri discloses all aspects of the claimed invention and further teaches the step of rerouting the communication signal includes issuing commands from the first end node to the one or more second intermediate nodes to unidirectionally reroute the communication signal along the second path in a first direction (col. 7, line 58-67, col. 8, line 33-35, communication between two end nodes and its adjacent nodes, col. 7, line 32-33 bi-directional SONET protocol, i.e. it can route either direction).

- Referring to claims 10 and 18, Chaudhuri discloses all aspects of the claimed invention and further teaches the step of rerouting the communication signal further includes issuing commands from the second end node to the one or more second intermediate nodes to unidirectionally reroute the communication/signal along the second path in a second direction (col. 7, line 58-67, col. 8, line 33-35, communication between two end nodes and its adjacent nodes).

- Referring to claims 11 and 19, Chaudhuri discloses all aspects of the claimed invention and further teaches the mesh network is a synchronous optical network (SONET), defined by the ANSI T1.105 (col. 7, line 32-33).

- Referring to claims 12 and 20, Chaudhuri discloses all aspects of the claimed invention and further teaches rerouting the communication signal over the second path uses a contention technique (col. 8, line 40-50, link and path are disjointed from restoration path; col. 6, line 38-42, localized restoration is attempt first where the failed node tries to restore on another path, if no capacity available then it informed the two end nodes for computed data).

- Referring to claim 13, Chaudhuri discloses a self-healing mesh network having a first end node and a second end node (col. 1, line 65-66), comprising: a first communication path that transmits a communication signal, the first communication path including the first end node (figure 1, 12E end node and 19E port), the second end node (figure 1, 12D end node and 19D port) and one or more first intermediate nodes (figure 1, nodes 12A, 12B, 12C, 12E, 12F, 12G); an error detecting device in at least one of the first end node and the second end node (col. 2, line 21-24); and a predetermined second path that transmits the communication signal after the error detecting device detects an error condition (col. 2, line 23-25, access database of pre-computed

paths corresponding to failed path), the predetermined second path consisting of the first end node, the second end node, one or more second intermediate nodes (col. 2, line 26-32), wherein the second intermediate nodes are disjoint from the one or more first intermediate nodes (col. 1, line 39-42, col. 8, line 41-44, figure 3 links 14.3, 14.10, 14.9 share no common nodes with restoration path of links 14.8, 14.7, 14.6).

- Referring to claim 15, Chaudhuri discloses all aspects of the claimed invention and further teaches the communication signal is rerouted from the first communication path to the second path based on an error condition from the error detecting device (col. 2, line 23-25, access database of pre-computed paths corresponding to failed path).

- Referring to claim 16, Chaudhuri discloses all aspects of the claimed invention and further teaches the communication signal is rerouted from the first communication path to the second path based on a communication of the second end node (col. 7, line 58-67, col. 8, line 33-35, communication between two end nodes and its adjacent nodes).

Conclusion

3.   The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

- Grover et al. (US Patent 6,377,543) discloses path restoration of networks

- Bentall et al. (US Patent 6,163,525) discloses network restoration

- Chow et al. (US Patent 5,495,471) discloses system and method of restoring a telecommunications network based on a two prong approach

4.   Any inquiry concerning this communication or earlier communications from the

examiner should be directed to Yvonne Q. Ha whose telephone number is 703-305-8392. The

examiner can normally be reached on Monday-Friday 7a.m.-4p.m. Eastern.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's

supervisor, Ricky Ngo can be reached on 703-305-4798. The fax phone numbers for the

organization where this application or proceeding is assigned are 703-305-3988 for regular

communications and 703-305-9051 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding

should be directed to the receptionist whose telephone number is 703-305-3900.

YQH
January 13, 2003

RICKY NGO
PRIMARY EXAMINER